

CLAIMS

1. A filter element for separating solid particles from a fluid containing them, wherein ultrahigh molecular weight polyethylene fine powders, which have an average molecular weight of 3,000,000 to 11,000,000 and a bulk specific gravity of 0.15 to 0.29, are the aggregate of primary particles, and are shaped to have voids of 1 to 5 μm in a part wherein the primary particles are connected, are filled into the pores on the surface of a filter element base made of an open-cell porous molded body prepared by heating and sintering synthetic resin powders, a non-woven fabric or a felt.

2. The filter element according to claim 1, wherein the ultrahigh molecular weight polyethylene fine powders have an average particle size of from 3 to 150 μm .

3. The heat-resistive filter element according to claim 1, wherein heat resistance is applied to the filter element by impregnating ultrahigh molecular weight polyethylene fine powder

particles with an antioxidant.

4. A method for producing a filter element for separating solid particles from a fluid containing them, wherein ultrahigh molecular weight polyethylene fine powders, which have an average molecular weight of 3,000,000 to 11,000,000 and a bulk specific gravity of 0.15 to 0.29, are the aggregate of primary particles and are shaped to have voids of 1 to 5 μm in a part wherein the primary particles are connected, are coated with an aqueous suspension dispersed in water together with at least a water dispersible binder and filled into the pores on the surface of a filter element base made of an open-cell porous molded body prepared by heating and sintering synthetic resin powders, a non-woven fabric or a felt.